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Item 4.8.6 of the provisional agenda
1958 Agreement:
Consideration of draft amendments
to existing UN Regulations submitted by GRRF

Proposal for Supplement 4 to UN Regulation No. 108 (Retreaded tyres for passenger cars and their trailers)

Submitted by the Working Party on Brakes and Running Gear*

The text reproduced below was adopted by the Working Party on Brakes and Running Gear (GRRF) at its eighty-sixth session (ECE/TRANS/WP.29/GRRF/86, para. 34). It is based on ECE/TRANS/WP.29/GRRF/2018/8 and Annex IV to the report. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their June 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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1805176

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Supplement 4 to UN Regulation No. 108 (Retreaded tyres for passenger cars and their trailers)

Contents,

Insert a new Annex 9, to read:

"9 Procedures for snow performance testing relative to snow tyre for use in severe snow conditions

Appendix 1 Pictogram definition of Alpine symbol

Appendix 2 Test reports and test data for C1 tyres"

Paragraph 2.3.2., amend to read:

"2.3.2. "*Snow tyre*" means a tyre whose tread pattern, tread compound or structure, are primarily designed to achieve in snow conditions a performance better than that of a normal tyre with regard to its ability to initiate or maintain vehicle motion."

Insert a new paragraph 2.3.2.1., to read:

"2.3.2.1. "*Snow tyre for use in severe snow conditions*" means a snow tyre whose tread pattern, tread compound or structure is specifically designed to be used in severe snow conditions and that fulfils the requirements of paragraph 7.2. of this Regulation"

Paragraph 2.26., footnote 3, amend to read:

" [3] ETRTO, 78, Rue Defacqz, B-1060 Brussels, Belgium"

Insert new paragraphs 2.48. to 2.53., to read:

"2.48. "*Representative tyre size*" means the tyre size which is submitted to the test described in Annex 9 to this Regulation to assess the performance of a range of tyres produced by the retreading production facility with regard to their performance for use in severe snow conditions. It can be either a retreaded tyre produced with a pre-cured tread or a retreaded tyre with mould cure process.

2.49. "*Standard reference test tyre (SRTT)*" means a tyre that is produced, controlled and stored in accordance with the American Society for Testing and Materials (ASTM) standards: E1136-93 (2003) for the size 195/75R14;

2.50. "*Control tyre*" means a new production tyre that is used to establish the snow grip performance of tyre sizes unable to be fitted to the same vehicle as the standard reference test tyre – see paragraph 3.4.3. of Annex 9 to this Regulation

2.51. "*Snow grip index (SG)*" means the ratio between the performance of the candidate tyre and the performance of the standard reference test tyre.

2.52. "*Candidate tyre*" means a tyre, that is submitted to one of the procedures for snow performance testing relative to snow tyre for use in severe snow conditions – see Annex 9 to this Regulation.

2.53. Class C1 tyres: Tyres conforming to UN Regulation No. 30."

Insert a new paragraph 3.2.6.1., to read:

"3.2.6.1. The "Alpine" symbol (3-peak-mountain with snowflake) shall be added if the snow tyre is classified as "snow tyre for use in severe snow conditions". In

addition, in case a pre-cured tread is used for the retreading process, the inscription M+S or MS or M.S. or M & S and the "Alpine" symbol shall be marked, at least once, on both sides of the tread shoulder. In both cases, the "Alpine" symbol ("3-peak-mountain with snowflake") shall conform to the symbol described in Annex 9, Appendix 1."

Insert a new paragraph 4.1.4.3.1., to read:

"4.1.4.3.1. For snow tyres the list of tyres having to fulfil the requirements of paragraph 7.2."

Add new subparagraphs 4.1.4.3.1.1 and 4.1.4.3.1.2.

"4.1.4.3.1.1. For tyres retreaded by using pre-cured tread material with a tread pattern covered by paragraph 6.6.3.1. the list shall clearly identify the tyres in order to make the relevant link with the list(s) quoted in paragraph 6.6.3.1. b). The following table is as example:

Tyre Size Designation, Load indexes, Speed symbol	*TM1*	*TM2*	*TM3*
185/60 R 14 82 H	TPM1/TPR1, TR1/TL1	-	TPM2/TPR2, TR2/L2
195/65 R 15 91 H	TPM1/TPR1, TR1/TL1	-	-
205/55 R 16 94 V XL	-	TPM3/TPR3, TR3/TL3	TPM4/TPR4, TR4/TL4
235/60 R 17 102 H	-	-	-
255/45 R 18 99 V	-	TPM5/TPR5, TR5/TL5	-

Note:
TM: Identification of the Tread Manufacturer
TPM: Identification of the Tread Pattern by the tread Manufacturer
TPR: Identification of the Tread Pattern by the Retreader
TR: Number of the test report
TL: Reference of the list linked to the test report

4.1.4.3.1.2. For tyres retreaded by using either mould cure or pre-cured tread material with the same major features including tread pattern(s) as a new tyre type and covered by paragraph 6.6.3.2. the list shall clearly identify the tyres in order to make the relevant link with the list(s) quoted in paragraph 6.6.3.2. a)."

Insert new paragraphs 4.2., 4.2.1. and 4.3., to read:

"4.2. The application for approval shall be accompanied by:

4.2.1. Details of the major features, including the tread pattern, with respect to the effects on the snow grip performance of the range of tyre sizes listed as required by paragraph 4.1.4.3.1. This may be by means of descriptions supplemented by drawings and/or photographs which must be sufficient to allow the type approval authority or technical service to determine whether any subsequent changes to the major features will adversely affect the tyre performance. The effects of changes to minor details of tyre construction on tyre performances will be evident and determined during checks on conformity of production;

4.3. At the request of the Type Approval Authority, the applicant shall submit samples of tyres for test or copies of test reports from the technical services, communicated as given in paragraph 12. of this Regulation."

Paragraph 5.4., amend to read:

"5.4. Before granting approval the authority must be satisfied that retreaded tyres conform to this Regulation and that the tests have been successfully carried out:

(a) On at least five and not necessarily more than 20 samples of retreaded tyres representative of the range of tyres produced by the retreading production unit when prescribed according to paragraphs 6.7. and 6.8. and;

(b) On at least one sample of retreaded tyres, of each pattern not covered by paragraphs 6.6.3.1. and 6.6.3.2., representative of the range of tyres produced by the retreading production unit when prescribed according to paragraph 6.8.2.*. In case of paragraph 6.6.3.2., the Type Approval Authority might request a test of compliance for the retreaded tyre. Testing of sampled sizes may be confined to a worst case selection*, at the discretion of the Type Approval Authority or designated Technical Service."

Insert new paragraphs 6.6.3.1. and 6.6.3.2. and a footnote *, to read:

"6.6.3.1. For tyres retreaded by using pre-cured tread material(s) with a tread pattern not covered by paragraph 6.6.3.2. having to fulfil the requirements of paragraph 7.2. * the retreader shall ensure that the material manufacturer(s) or the material supplier(s) of the pre-cured tread material provides:

(a) To the Type Approval Authority and the Technical Service issuing the approval according to this regulation and optionally to the retreader:

(i) A copy of the test report(s) as in Annex 9, Appendix 2 of the representative tyre size(s) (see definitions in paragraph 2.) demonstrating compliance of the precured tread(s) to the requirements of paragraph 7.2.;

(b) To the retreader:

(i) The list(s) of tyre sizes to which it can be applied for the retreading process and validated by the same designated Technical Service and Type Approval Authority which issued the test report in paragraph 6.6.3.1.(a) The list(s) shall include at least the tyres defined in paragraph 4.1.4.3.1.1.

(ii) A copy of the measures taken to ensure the conformity of production.

These measures shall include test results demonstrating that the minimum levels of the snow performances required in paragraph 7.2.1. will be maintained and demonstration periodically the compliance with the requirement defined in paragraph 9.2.3 or 9.4.3.

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* If a tread pattern can be applied by mould cure and pre-cured retread processes,the snow test may be performed with a representative tyre size retreaded with only one of the two possible processes and the snow performance test report can be used for both cases as long as the major features of the tread are technically identical. This will be proven by means of written official permission by the holder of the tread snow performance report.

6.6.3.2. For tyres retreaded by using either mould cure or pre-cured tread material(s) with the same major features including tread pattern(s) as a new tyre type approved according to UN Regulation No. 117 having fulfilled the

requirements about minimum snow performance in severe snow conditions, the retreader shall ensure that the manufacturer of the new tyre type provides:

(a) To the Type Approval Authority and Technical Service issuing the approval according to this regulation and optionally to the retreader a copy of the UN Regulation No. 117 certificate(s) and a copy of the appropriate test report(s) issued by a designated Technical Service** demonstrating compliance of the new tyre to the minimum snow performance in severe snow conditions.

(b) To the retreader:

(i) The list(s) of tyre sizes to which it can be applied for the retreading process and validated by the same designated Technical Service** and/or Type Approval Authority that issued the UN Regulation No. 117 certificate(s). The list(s) shall include at least the tyres defined in paragraph 4.1.4.3.1.2.

(ii) The drawing(s) of the tread pattern(s) covered by the UN Regulation No. 117 certificate(s);

(iii) A copy of the last report of the conformity of production as required in UN Regulation No. 117 and demonstration periodically the compliance with the requirement defined in paragraph 9.2.4. or paragraph 9.4.4."

** Refer to the designated Technical Services listed in the document ECE/TRANS/WP.29/343 in its latest revision.

Paragraph 6.8., amend to read:

"6.8. Performance tests"

Insert a new paragraph 6.8.1., to read:

"6.8.1. Load/speed endurance test:"

Renumber former paragraph 6.8.1. *as* 6.8.1.1.

Renumber paragraphs 6.8.2. and 6.8.3. as 6.8.1.2. and 6.8.1.3.

Insert new paragraphs 6.8.2. and 6.8.2.1., to read:

"6.8.2. Snow test

6.8.2.1. Retreated Snow Tyres for use in severe snow conditions to comply with this regulation shall be capable of meeting snow performance test as specified in Annex 9 to this Regulation."

Insert new paragraphs 7.2. and 7.2.1., to read:

"7.2. In order to be classified as a "snow tyre for use in severe snow conditions", the retreaded tyre to comply with this Regulation shall meet the performance requirements of paragraph 7.2.1. The retreaded tyre size shall meet these requirements based on a test method of Annex 9 by which:

(a) The mean fully developed deceleration ("mfdd") in a braking test;

(b) Or alternatively an average traction force in a traction test;"

7.2.1. For Class C1 tyres, the minimum snow index value, as calculated in the procedure described in Annex 10 and compared with the SRTT shall be as follows:

Class of tyre	*Snow grip index (brake on snow method) (a)*	*Snow grip index (spin traction method) (b)*
C1	*1.07*	*1.10*

Notes:
(a) See paragraph 3. of Annex 9 to this Regulation
(b) See paragraph 2. of Annex 9 to this Regulation"

Paragraph 9.2., amend to read:

"9.2. The holder of the approval shall ensure that, at least the following number of tyres, representative of the range being produced, is checked and tested as prescribed in this Regulation:"

Paragraph 9.2.1., amend to read:

"9.2.1. 0.01 per cent of the total annual production but in any case not less than five and not necessarily more than 20 during each year of production, and spread throughout that year;"

Insert a new paragraph 9.2.2., to read:

"9.2.2. At least 1 tyre once every two years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.8.2. and not covered by paragraphs 6.6.3.1. or 6.6.3.2."

Insert a new paragraph 9.2.3., to read:

"9.2.3. At least 1 tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.8.2. and covered by paragraphs 6.6.3.1. The retreader can use the snow performance periodic test results obtained by the tread manufacturer or tread supplier for this purpose."

Insert a new paragraph 9.2.4., to read:

"9.2.4. At least 1 tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.8.2. and covered by paragraphs 6.6.3.2. The retreader can use the snow performance periodic test results obtained by the owner of the original UN Regulation No. 117 approval certificate."

Paragraph 9.4., amend to read:

"9.4. The authority which has approved the retreading production unit may at any time verify the conformity control methods applied in each production facility including among others the prescriptions defined in the paragraph 6.6.3.1.(c) and 6.6.3.2.(c). For each production facility, the type Approval Authority shall take samples at random and at least the following number of tyres, representative of the range being produced, shall be checked and tested as prescribed in this Regulation:"

Paragraph 9.4.1., amend to read:

"9.4.1. 0.01 per cent of the total annual production but in any case not less than five and not necessarily more than 20 during each and every production year;"

Insert a new paragraph *9.4.2.*, to read:

"9.4.2. At least 1 tyre once every two years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.8.2. and not covered by paragraphs 6.6.3.1. or 6.6.3.2."

Insert a new paragraph 9.4.3., to read:

"9.4.3. At least 1 tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.8.2. and covered by paragraphs 6.6.3.1. The retreader can use the snow performance periodic test results obtained by the tread manufacturer or tread supplier for this purpose."

Insert a new paragraph 9.4.4., to read:

"9.4.4. At least 1 tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.8.2. and covered by paragraphs 6.6.3.2. The retreader can use the snow performance periodic test results obtained by the owner of the original UN Regulation No. 117 approval certificate."

Insert a new Annex 9, to read:

"Annex 9

Procedures for snow performance testing relative to snow tyre for use in severe snow conditions

1. Specific definitions for snow test when different from existing ones

1.1. "*Test run*" means a single pass of a loaded tyre over a given test surface.

1.2. "*Braking test*" means a series of a specified number of ABS-braking test runs of the same tyre repeated within a short time frame.

1.3. "Acceleration test" means a series of specified number of traction controlled acceleration test runs of the same tyre repeated within a short timeframe

2. Spin traction method for Class C1 tyres

The test procedure of ASTM standard F1805-06 shall be used to assess snow performance through spin traction values on medium packed snow (The snow compaction index measured with a CTI penetrometer[1] shall be between 70 and 80).

2.1. The test course surface shall be composed of a medium packed snow surface, as characterized in table A2.1 of ASTM standard F1805-06.

2.2. The tyre load for testing shall be as per option 2 in paragraph 11.9.2. of ASTM standard F1805-06

3. Braking on snow method for Class C1 tyres

3.1. General conditions

3.1.1. Test course

The braking tests shall be done on a flat test surface of sufficient length and width, with a maximum 2 per cent gradient, covered with packed snow. The snow surface shall be composed of a hard packed snow base at least 3 cm thick and a surface layer of medium packed and prepared snow about 2 cm thick. The air temperature, measured about one meter above the ground, shall be between -2 °C and -15 °C; the snow temperature, measured at a depth of about one centimeter, shall be between -4 °C and -15 °C. It is recommended to avoid direct sunlight, large variations of sunlight or humidity, as well as

wind. The snow compaction index measured with a CTI penetrometer[1] shall be between 75 and 85.

[1] See appendix of ASTM standard F1805-06 for details.

3.1.2. Vehicle

The test shall be conducted with a standard production vehicle in good running order and equipped with an ABS system. The vehicle used shall be such that the loads on each wheel are appropriate to the tyres being tested. Several different tyre sizes can be tested on the same vehicle.

3.1.3. Tyres

The tyres should be "broken-in" prior to testing to remove spew, compound nodules or flashes resulting from the moulding process. The tyre surface in contact with snow shall be cleaned before performing a test. Tyres shall be conditioned at the outdoor ambient temperature at least two hours before their mounting for tests. Tyre pressures shall then be adjusted to the values specified for the test. In case a vehicle cannot accommodate both the reference and candidate tyres, a third tyre ("control" tyre) may be used as an intermediate. First test control vs. reference on another vehicle, then test candidate vs. control on the vehicle

3.1.4. Load and pressure

3.1.4.1. For C1 tyres, the vehicle load shall be such that the resulting loads on the tyres are between 60 per cent and 90 per cent of the load corresponding to the tyre load index. The cold inflation pressure shall be 240 kPa.

3.1.5. Instrumentation

The vehicle shall be fitted with calibrated sensors suitable for measurements in winter. There shall be a data acquisition system to store measurements. The accuracy of measurement sensors and systems shall be such that the relative uncertainty of the measured or computed mean fully developed decelerations is less than 1 per cent.

3.2. Testing sequences

3.2.1. For every candidate tyre and the standard reference tyre, ABS-braking test runs shall be repeated a minimum of 6 times. The zones where ABS-braking is fully applied shall not overlap. When a new set of tyres is tested, the runs are performed after shifting aside the vehicle trajectory in order not to brake on the tracks of the previous tyre. When it is no longer possible not to overlap full ABS-braking zones, the test course shall be re-groomed.

Required sequence:

6 repeats SRTT, then shift aside to test next tyre on fresh surface

6 repeats Candidate 1, then shift aside

6 repeats Candidate 2, then shift aside

6 repeats SRTT, then shift aside

3.2.2. Order of testing:

If only one candidate tyre is to be evaluated, the order of testing shall be:

R1 - T - R2

Where:

R1 is the initial test of the SRTT, R2 is the repeat test of the SRTT and

T is the test of the candidate tyre to be evaluated.

A maximum of two candidate tyres may be tested before repeating

the SRTT test, for example:

R1 - T1 - T2 - R2.

3.2.3. The comparative tests of SRTT and candidate tyres shall be repeated on two different days.

3.3. Test procedure

3.3.1. Drive the vehicle at a speed not lower than 28 km/h.

3.3.2. When the measuring zone has been reached, the vehicle gear is set into neutral, the brake pedal is depressed sharply by a constant force sufficient to cause operation of the ABS on all wheels of the vehicle and to result in stable deceleration of the vehicle and held down until the speed is lower than 8 km/h.

3.3.3. The mean fully developed deceleration between 25 km/h and 10 km/h shall be computed from time, distance, speed, or acceleration measurements.

3.4. Data evaluation and presentation of results

3.4.1. Parameters to be reported

3.4.1.1. For each tyre and each braking test, the mean and standard deviation of the mfdd shall be computed and reported. The coefficient of variation CV of a tyre braking test shall be computed as:

$$CV(\text{tyre}) = \frac{\text{Std. dev (tyre)}}{\text{Mean (tyre)}}$$

3.4.1.2 Weighted averages (wa) of two successive tests of the SRTT shall be computed taking into account the number of candidate tyres in between:

In the case of the order of testing R1 - T - R2, the weighted average of the SRTT to be used in the comparison of the performance of the candidate tyre shall be taken to be:

wa(SRTT) = (R1 + R2)/2

Where:

R1 is the mean fully developed deceleration for the first test of the SRTT and R2 is the mean mfdd for the second test of the SRTT.

In the case of the order of testing R1 – T1 – T2 – R2, the weighted average (wa) of the SRTT to be used in the comparison of the performance of the candidate tyre shall be taken to be:

wa (SRTT) = 2/3 R1 + 1/3 R2 for comparison with the candidate

tyre T1; and:

wa (SRTT) = 1/3 R1 + 2/3 R2 for comparison with the candidate tyre T2.

3.4.1.3. The snow grip index (SG) in per cent of a candidate tyre shall be computed as:

Mean (candidate)

SnowGrip Index (candidate) = ----------

wa (SRTT)

3.4.2. Statistical validations

The sets of repeats of measured or computed mfdd for each tyre should be examined for normality, drift, eventual outliers. The consistency of the means and standard-deviations of successive braking tests of SRTT should be examined. The means of two successive SRTT braking tests shall not differ by more than 5 per cent. The coefficient of variation of any braking test shall be less than 6 per cent. If those conditions are not met, tests shall be performed again after regrooming the test course.

3.4.3. In the case where the candidate tyres cannot be fitted to the same vehicle as the SRTT, for example, due to tyre size, inability to achieve required loading and so on, comparison shall be made using intermediate tyres, hereinafter referred to as "control tyres", and two different vehicles. One vehicle shall be capable of being fitted with the SRTT and the control tyre and the other vehicle shall be capable of being fitted with the control tyre and the candidate tyre.

3.4.3.1. The snow grip index of the control tyre relative to the SRTT (SG1) and of the candidate tyre relative to the control tyre (SG2) shall be established using the procedure in paragraphs 3.1. to 3.4.2. above. The snow grip index of the candidate tyre relative to the SRTT shall be the product of the two resulting snow grip indices that is SG1 x SG2.

3.4.3.2. The ambient conditions shall be comparable. All tests shall be completed within the same day.

3.4.3.3. The same set of control tyres shall be used for comparison with the SRTT and with the candidate tyre and shall be fitted in the same wheel positions.

3.4.3.4. Control tyres that have been used for testing shall subsequently be stored under the same conditions as required for the SRTT.

3.4.3.5. The SRTT and control tyres shall be discarded if there is irregular wear or damage or when the performance appears to have been deteriorated.

Annex 9 - Appendix 1

Pictogram definition of "Alpine Symbol"

Minimum 15 mm base and 15 mm height.
(Please note that the drawing above is not to scale.)

Annex 9 - Appendix 2

Test reports and test data for C1 tyres

Part 1 – Report

1. Type Approval Authority or Technical Service:.....
2. Name and address of applicant: .....
3. Test report No.: .....
4. Manufacturer and brand name or trade description:
5. Tyre class: .....
6. Category of use: .....
7. Snow index relative to SRTT according to paragraph 7.2.1.

7.1. Test procedure and SRTT used.....

8. Comments (if any):.....
9. Date: .....
10. Signature: .....
11. Signature of the technical service:
12. Signature of the Type Approval Authority:

Part 2 - Test data

1. Date of test: .....

2. Location of test track: .....

2.1. Test track characteristics:

	At start of tests	*At end of tests*	*Specification*
Weather			
Ambient temperature			-2 °C to -15 °C
Snow temperature			-4 °C to -15 °C
CTI index			75 to 85
Other			

3. Test vehicle (make, model and type, year): .....

4. Test tyre details .....

4.1. Tyre size designation and service description: .....

4.2. Tyre brand and trade description: .....

4.3. Test tyre data:

	SRTT (1st test)	*Candidate*	*Candidate*	*SRTT (2nd test)*
Tyre dimensions				
Test rim width code				
Tyre loads F/R (kg)				
Load index F/R (per cent)				
Tyre pressure F/R(kPa)				

5. Test results: mean fully developed decelerations (m/s^2) coefficient.

Run number	*Specification*	*SRTT (1st test)*	*Candidate*	*Candidate*	*SRTT (2nd test)*
1					
2					
3					
4					
5					
6					
Mean					
Std-deviation					
CV (%)	< 6 %				
Validation SRTT	(SRTT) < 5%	X	X	X	
SRTT average			X	X	X
Snow index		1.00			X

"

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Submitted by the Working Party on Brakes and Running Gear*

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* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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Please recycle

Supplement 9 to UN Regulation No. 109 (Retreaded tyres for commercial vehicles and their trailers)

Paragraph 1., amend to read:

"1. Scope

This Regulation covers the production of retreaded pneumatic tyres* designed primarily for vehicles of category M_2, M_3, N, O_3 and O_4 [1] [2]. However, it does not apply to the production of:

-....

* For the purpose of this Regulation "tyres" means "pneumatic tyres".

Paragraph 2.1., amend to read:

"2.1. Range of retreaded tyres means a range of retreaded tyres as quoted in paragraph 4.1.5."

Insert a new paragraph 2.2. to read:

"2.2. "*Retreader*" means the person or body who is responsible to the Type Approval Authority (TAA) for all aspects of the type-approval under this Regulation and for ensuring the conformity of production."

Insert a new paragraph 2.3. to read:

"2.3. "*Tyre Manufacturer*" means the person or body who was responsible to the TAA having granted the original new type approval and for ensuring the conformity of production under the applicable Regulation for new tyres."

Insert a new paragraph 2.4. to read:

"2.4. "*Material manufacturer / material supplier*" means the person or body who provides to the retreader the retreading or repair materials."

Insert a new paragraph 2.5. to read:

"2.5. "*Brand name/trademark*" means the identification of the brand or trademark as defined by the retreader and marked on the sidewall(s) of the tyre. The brand name/trademark may be the same as that of the retreader."

Insert a new paragraph 2.6. to read:

"2.6. "*Trade description/commercial name*" means an identification of a range of tyres as given by the retreader. It may coincide with the brand name/trademark."

Former paragraph 2.2., amend to read:

"2.7. "*Structure*" of a tyre means the technical characteristics of the tyre's carcass. The following structures are distinguished in particular:

2.7.1. "*Diagonal*" or "*Bias ply*" describes a tyre structure in which the ply cords extend to the beads and are laid at alternate angles substantially less than 90° to the centreline of the tread.

2.7.2. "*Bias belted*" describes a tyre structure of diagonal (bias ply) type in which the carcass is stabilised by a belt, comprising two or more layers of

substantially inextensible cord material laid at alternate angles close to those of the carcass.

2.7.3. "*Radial*" describes a tyre structure in which the ply cords extend to the beads and are laid substantially at 90° to the centerline of the tread, the carcass being stabilised by an essentially inextensible circumferential belt."

Renumber *(former) paragraphs 2.3.* into *(new) 2.8.*

Former paragraph 2.4., amend to read:

"2.9. *"Bead"* means the part of a tyre which is of such shape and structure as to fit the rim and hold the tyre on it. "

Former paragraph 2.5., amend to read:

"2.10. *"Cord"* means the strands forming the fabric of the plies in the tyre. "

Renumber *(former) paragraphs 2.6. to 2.10.* into *(new) 2.11. to 2.15.*

Former paragraphs 2.11., 2.12. and 2.13. amend to read:

"2.16. *"Carcass"* means that structural part of a tyre other than the tread and outermost . "rubber" of the sidewalls which, when inflated, supports the load.

2.17. *"Tread"* means that part of a tyre which is designed to come into contact with the ground, protects the carcass against mechanical damage and contributes to ground adhesion.

2.18. *"Sidewall"* means the part of a tyre between the tread and the area designed to be covered by the rim flange."

Renumber *(former) paragraphs 2.14. to 2.15.* into *(new) 2.19. to 2.20.*

Former paragraphs 2.16. and 2.17. amend to read:

"2.21. *"Section width"* means the linear distance between the outside of the sidewalls of an inflated tyre, when fitted to the specified measuring rim, but excluding elevations due to labelling (marking), decoration or protective bands or ribs.

2.22. *"Overall width"*means the linear distance between the outside of the sidewalls of an inflated tyre, when fitted to the specified measuring rim, and including labelling (marking), decoration or protective bands or ribs."

Renumber *(former) paragraphs 2.18. to 2.20.* into *(new) 2.23. to 2.25.*

Former paragraph 2.21., amend to read:

"2.26. *"Tyre size designation"* means a designation showing:

2.26.1. The nominal section width. This must be expressed in millimetres, except in cases of tyres for which the size designation is shown in the first column of the tables in Annex 5 to this Regulation.

2.26.2. The nominal aspect ratio except in case of tyres for which the size designation is shown in the first column of the tables in Annex 5 to this Regulation or, depending on the tyre design type, for example, tyres identified by the tyre to rim fitment configuration symbol "A" (see paragraph 2.26.4.), the nominal outer diameter expressed in mm.

..."

Renumber *former paragraphs 2.21.3. to 2.32* into *2.26.3. to 2.37.*

Former paragraph 2.32., amend to read:

"2.37. "*Load index*" means a numerical code which indicates the load the tyre can carry at the speed corresponding to the associated speed symbol and when operated in conformity with the service conditions specified by the original tyre manufacturer or the retreader. A tyre can have more than one load index to indicate its load capacity when used in single or dual (twin) formation, or to indicate an alternative load capacity (Unique point) on which a load variation in accordance with paragraph 2.40. and Annex 8 to this Regulation is not permitted.

The list of load indices and the corresponding loads are shown in Annex 4 to this Regulation."

Renumber *former paragraphs 2.33.* into *2.38.*

Former paragraph 2.34., amend to read:

"2.39. *"Unique Point"* means an additional service description, marked adjacent to the normal service description, but which must not be used for calculating a load capacity variation with speed as defined in paragraph 2 and in Annex 8 to this Regulation."

Renumber *former paragraphs 2.35. to 2.52. into (new) 2.40. to 2.57.*

Paragraph 3.2.1., amend to read:

"3.2.1. The retreader's name or the brand name / trademark;"

Insert a new paragraph 3.2.2. to read:

"3.2.2. The trade description/commercial name (see paragraph 2. of this Regulation). However, the trade description is not required when it coincides with the brand name/trademark."

Renumber *former paragraphs 3.2.2. to 3.2.4.* into *3.2.3. to 3.2.5.*

Former paragraph 3.2.2., amend to read:

"3.2.3. The tyre-size designation as defined in paragraph 2.;"

Former paragraphs 3.2.4.1. to 3.2.5.2., amend to read:

"3.2.5.1. An indication of the tyre's nominal load capacity/capacities in the form of the load index/indices prescribed in paragraph 2.;

3.2.5.2. An indication of the tyre's nominal speed capability in the form of the speed symbol prescribed in paragraph 2.;

3.2.6. If applicable, one alternative service description, the Unique point, comprising:

3.2.6.1. An indication of the tyres load capacity/capacities in the form of the load index/indices prescribed in paragraph 2.;

3.2.6.2. An indication of the speed capability in the form of the speed symbol prescribed in paragraph 2.;"

Renumber *former paragraphs 3.2.6. to 3.2.7.* into *3.2.7. to 3.2.8.*

Former paragraphs 3.2.8. to 3.2.8.2. amend to read:

"3.2.9. The date of retreading as follows:

3.2.9.1. Up to 31 December 1999; either as prescribed in paragraph 3.2.9.2. or in the form of a group of three digits, the first two showing the week number and the third, the year of the decade of manufacture. The date code can cover a period of production from the week indicated by the week number up to and including the week number plus three. For example, the marking "253" could indicate a tyre which was retreaded in weeks 25, 26, 27 or 28 of the year 1993.

The date code may be marked on one sidewall only.

3.2.9.2. As from 1 January 2000; in the form of a group of…."

Renumber *former paragraphs 3.2.9. to 3.2.13.* into *3.2.10. to 3.2.14.*

Former paragraphs 3.2.13. and 3.2.14., amend to read:

"3.2.14. Tyres retreaded using the "bead to bead" process as defined in paragraph 2.42.3., or any process in which the sidewall material is renewed, shall have the identification referred to in paragraph 2.26.4., placed only immediately after the rim diameter marking referred to in paragraph 2.26.3.

3.2.15. The prefix "LT" or the suffix "C" or "LT" following the rim diameter marking referred to in paragraph 2.26.3. and, if applicable, after the tyre to rim fitment configuration symbol referred to in paragraph 2.26.4. or the suffix "LT" after the service description."

Renumber *former paragraphs 3.2.14.1. and 3.2.14.2. into 3.2.15.1. to 3.2.15.2.*

Former paragraph 3.2.15., amend to read:

"3.2.16. The suffix "CP" following the rim diameter marking referred to in paragraph 2.26.3. and, if applicable, after the tyre to rim configuration symbol referred to in paragraph 2.26.4. This marking is mandatory in the case of tyres fitted on 5° drop centre rims, having a load index in single fitment equal to or less than 121 and specifically designed for the equipment of motor caravans."

Renumber *former paragraphs 3.2.16. into 3.2.17.*

Paragraph 4.1., amend to read:

"4.1. The application for approval of a retreading production unit shall be submitted by the retreader or by his duly accredited representative. It shall specify:

……."

Paragraph 4.1.3., amend to read:

"4.1.3. The brand name(s)/trademark(s) to be applied to the retreaded tyres produced."

Insert a new paragraph 4.1.4. to read:

"4.1.4. The trade description(s)/commercial name(s) (see paragraph 2.) which could be applied to the retreaded tyres produced."

4.1.5. The following information in relation to the range of tyres to be retreaded:

4.1.5.1. The range of tyre sizes;

4.1.5.2. The structure of tyres (diagonal or bias ply, bias-belted or radial);

4.1.5.3. The category of use of tyres (normal, snow or special tyres);

4.1.5.3.1. For snow tyres the list of tyres having to fulfil the requirements of paragraph 7.2."

Add new subparagraph 4.1.5.3.1.1 and 4.1.5.3.1.2.:

"4.1.5.3.1.1. For tyres retreaded by using pre-cured tread material with a tread pattern covered by paragraph 6.4.4.1. the list shall clearly identify the tyres in order to make the relevant link with the list(s) quoted in paragraph 6.4.4.1. b). The following table is an example:

Tyre Size Designation, Load indexes, Speed symbol	*TM1*	*TM2*	*TM3*
215/75 R 17.5 126/124 M	TPM1/TPR1, TR1/TL1	-	TPM2/TPR2, TR2/L2
235/75 R 17.5 132/130 M	TPM1/TPR1, TR1/TL1	-	-
265/70 R 17.5 138/136 M	-	TPM3/TPR3, TR3/TL3	TPM4/TPR4, TR4/TL4
245/70 R 19.5 136/134 M	-	-	-
12 R 22.5 152/148 K	-	TPM5/TPR5, TR5/TL5	-

Note:
TM: Identification of the Tread Manufacturer
TPM: Identification of the Tread Pattern by the tread Manufacturer
TPR: Identification of the Tread Pattern by the Retreader if different of TPM
TR: Number of the test report
TL: Reference of the list linked to the test report

4.1.5.3.1.2. For tyres retreaded by using either mould cure or pre-cured tread material with the same major features including tread pattern(s) as a new tyre type and covered by paragraph 6.4.4.2. , the list shall clearly identify the tyres in order to make the relevant link with the list(s) quoted in paragraph 6.4.4.2. a)."

(Former) paragraph 4.1.4.4., amend to read:

"4.1.5.4. the system of retreading and the method of application of the new materials to be used, as defined in paragraphs 2.42. and 2.46.;"

Renumber *(former) paragraphs 4.1.4.5., 4.1.4.6. and 4.1.4.7. into 4.1.5.5., 4.1.5.6 and 4.1.5.7.*

Paragraph 4.2.1., amend to read:

"4.2.1. Details of the major features, including the tread pattern, with respect to the effects on the snow grip performance of the range of tyre sizes listed as required by paragraph 4.1.5.3.1. …."

Paragraph 5.5., amend to read:

"5.5. In the case of each failure being recorded during tests, two further samples of the same specification tyre shall be tested. If either or both of these second two samples fail, then a final submission of two samples shall be tested. If either one or both of the final two samples fail, then the application for approval of the retreading production unit shall be rejected."

Paragraph 6.3.7., amend to read:

"6.3.7. Exposed steel parts shall be treated as soon as possible with appropriate material as defined by the material manufacturer of that appropriate material."

Paragraph 6.4.1., amend to read:

"6.4.1. The retreader must ensure that either the material manufacturer or the supplier of repair materials, including patches, is responsible for the following:

.....

(d) Ensuring that the patches are capable of withstanding twice the maximum inflation pressure as given by the original tyre manufacturer;"

Paragraph 6.4.4., amend to read:

"6.4.4. The retreader shall ensure that either the material manufacturer or the supplier of tread and sidewall material issues specifications concerning the conditions of storage and use of the material in order to guarantee the material's qualities. If requested by the retreader, this information shall be in the national language of the country in which the materials are to be used.

6.4.4.1. For tyres retreaded by using pre-cured tread material(s) with a tread pattern not covered by paragraph 6.4.4.2. having to fulfil the requirements of paragraph 7.2. * the retreader shall ensure that the material manufacturer(s) or the material supplier(s) of the pre-cured tread(s) provides:

(a) To the Type Approval Authority (TAA) and the Technical Service issuing the approval according to this Regulation and optionally to the retreader:

(i) A copy of the test report(s) as in Annex 10, Appendix 3 of the representative tyre size(s) (see definition in paragraph 2.) demonstrating compliance of the pre-cured tread(s) to the requirements of paragraph 7.2.

(b) To the retreader

(i) The list(s) of tyre sizes to which it can be applied for the retreading process and validated by the same designated Technical Service and TAA which issued the test report(s) in paragraph 6.4.4.1. a). The list(s) shall include at least the tyres defined in paragraph 4.1.5.3.1.1.

(ii) A copy of the measures taken to ensure the conformity of production. These measures shall include test results demonstrating that the minimum levels of the snow performances required in paragraph 7.2.1 will be maintained; and demonstrating periodically the compliance with the requirement defined in paragraph 9.2.3. or 9.4.3.

---

* If a tread pattern can be applied by mould cure and pre-cure retread processes, the snow test may be performed with a representative tyre size retreaded with only one of the two possible processes and the snow performance test report can be used for both cases as long as the major features of the tread are technically identical. This will be proven by means of written official permission by the holder of the tread snow performance report.

6.4.4.2. For tyres retreaded by using either mould cure or pre-cured tread material(s) with the same major features including tread pattern(s) as a new tyre type approved according to UN Regulation No. 117 having fulfilled the

requirements about minimum snow performance in severe snow conditions, the retreader shall ensure that the manufacturer of the new tyre type provides:

(a) To the Type Approval Authority (and the Technical Service) issuing the approval according to this UN Regulation and optionnally to the retreader a copy of the UN Regulation No. 117 certificate(s) and a copy of the appropriate test report(s) issued by a designated Technical Service** demonstrating compliance of the new tyre to the minimum snow performance in severe snow conditions.

(b) To the retreader:

(i) The list(s) of tyre sizes to which it can be applied for the retreading process and validated by the same designated Technical Service** and/or Type Approval Authority that issued the UN Regulation No. 117 certificate(s). The list(s) shall include at least the tyres defined in paragraph 4.1.5.3.1.2.;

(ii) The drawing(s) of the tread pattern(s) covered by the UN Regulation No 117 certificate(s);

(iii) A copy of the last report of the Conformity of Production as required in UN Regulation No. 117, and demonstrating periodically the compliance with the requirement defined in paragraph 9.2.4. or 9.4.4."

Paragraph 7.1.1.1., amend to read:

"7.1.1.1. The section width shall be calculated by the following formula:

$$S = S_1 + K (A - A_1)$$

where:

S : is the actual section width rounded to the nearest millimetre and measured on the test rim;

S_1: is the value of the 'Design Section Width', referred to the measuring rim, as quoted in the International Tyre Standard specified by the retreader for the tyre size in question;

A : is the width of the test rim in millimetres;

A_1: is the width in millimetres of the measuring rim as quoted in the International Tyre Standard specified by the retreader for the tyre size in question;

K : is a factor and shall be taken to equal 0.4.

7.1.1.1.1. In the case of tyres identified by the tyre to rim fitment configuration symbol "A" (see paragraph 2.26.4.1.) the factor "K" shall be 0.6."

Paragraph 7.1.2.1., amend to read:

"7.1.2.1. The theoretical outer diameter of a retreaded tyre shall be calculated by the following formula:

$$D = d + 2H$$

where:

D: is the theoretical outer diameter in millimetres;

d: is the conventional number defined in paragraph 2.26. in millimetres;

H: is nominal section height rounded to the nearest millimetre and is equal to S_n multiplied by 0.01 Ra

where:

S_n: is the nominal section width in millimetres;
Ra: is the nominal aspect ratio.

All of the above symbols are as quoted in the tyre size designation as shown on the sidewall of the tyre in conformity with the requirements of paragraph 3.2.3. and as defined in paragraph 2.26."

Paragraph 7.1.2.3., amend to read:

"7.1.2.3. In the case of tyres identified by the tyre to rim fitment configuration symbol "A" (see paragraph 2.26.4.), the outer diameter shall be that specified in the tyre size designation shown on the sidewall of the tyre."

Paragraph 7.1.4.2., amend to read:

"7.1.4.2. It may exceed the value by 5.5 per cent in the case of radial-ply tyres and 8 per cent in the case of diagonal (bias-ply) tyres. However, for tyres intended for dual mounting (twinning) listed in column A of the following table, the overall width of the tyre may exceed the value determined pursuant to paragraph 7.1.1. above taking into account the tolerances listed in column B. Other different specific tolerances are listed in Annex 5 Part II in footnotes of the relevant tables. The respective limits shall be rounded to the nearest millimetre.

A	*B*
Radial metric tyres with nominal section width exceeding 305 mm and aspect ratio higher than 60	3.5%
Radial tyres listed in Annex 5 Part I with section width exceeding 305 mm	3.5%
Diagonal metric tyres with nominal section width exceeding 305 mm	4%
Diagonal tyres listed in Annex 5 Part I with section width exceeding 305 mm	4%

"

Paragraph 7.1.4.3., amend to read:

"7.1.4.3. In the case of tyres identified by the tyre to rim fitment configuration symbol "A" (see paragraph 2.26.4.), the overall width of the tyre, in the lower area of the tyre, equals the nominal width of the measuring rim (see paragraph 2.), plus 27 mm."

Paragraph 7.1.5.1., amend to read:

"7.1.5.1. The actual outer diameter of a retreaded tyre must not be outside the values of Dmin and Dmax obtained by the following formulae:

$Dmin = d + 2 \cdot H_{min}$

$Dmax = 1.015 \cdot [d + 2 \cdot H_{max}]$

where

$H_{min} = H \cdot a$ rounded to the nearest mm

H_{max} = H • b rounded to the nearest mm

and:

"

Paragraph 7.1.5.1.2., amend to read:

"7.1.5.1.2. For sizes referred to in paragraph 7.1.2.2. and for tyres identified by the tyre to rim fitment configuration symbol "A" (see paragraph 2.26.4.), the nominal section height "H" is equal to:

H = 0.5(D – d), rounded to the nearest millimetre

where "D" and "d" are as defined in paragraph 7.1.2.1."

Paragraph 9.2.3., amend to read:

"9.2.3. At least one tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and covered by paragraph 6.4.4.1.The retreader can use the snow performance periodic testresults obtained by the tread manufacturer or tread supplier for thispurpose"

Insert a new paragraph 9.2.4. to read:

"9.2.4. At least one tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and covered by paragraphs 6.4.4.2. The retreader can use the current snow performance periodic test results obtained by the owner of the original UN Regulation No. 117 approval certificate."

Paragraph 9.4.3., amend to read:

"9.4.3. At least one tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and covered by paragraphs 6.4.4.1. The retreader can use the snow performance periodic test results obtained by the tread manufacturer or tread supplier for this purpose."

Insert a new paragraph 9.4.4. to read:

"9.4.4. At least one tyre once every four years in order to verify conformity of the performance of the snow tyres for use in severe snow conditions fulfilling paragraph 6.6.2. and covered by paragraphs 6.4.4.2. The retreader can use the current snow performance periodic test results obtained by the owner of the original UN Regulation No. 117 approval certificate."

Paragraph 12., amend to read:

"12. Names and addresses of technical services responsible for conducting approval tests, of test laboratories, and of Type Approval Authorities.

12.1. The Contracting Parties to the 1958 Agreement which apply this Regulation shall communicate to the United Nations Secretariat the names and addresses of the technical services responsible for conducting approval tests and, where applicable, of the approved test laboratories and of Type Approval Authorities which grant approval and to which forms certifying approval or

extension of approval or refusal of approval or withdrawal of approval or production definitely discontinued, issued in other countries, are to be sent.

12.2. The Contracting Parties to the 1958 Agreement which apply this Regulation may designate laboratories of tyre manufacturers or retreading production units as approved test laboratories.

12.3. Where a Contracting Party to the 1958 Agreement applies paragraph 12.2. above, it may, if it so desires, be represented at the tests by one or more persons of its choice."

Annex 1, amend to read:

"**Communication**

……

issued by: Name of the Type Approval Authority:

……

……

of a retreading production unit pursuant to UN Regulation No. 109.

Item 1., amend to read:

1. Retreader's name and address: .....

.....

……

Item 4. amend to read (including a new footnote 3):

4. Summarized description as defined in paragraphs 4.1.3., 4.1.4 and 4.1.5. of this Regulation:

4.1. Brand name(s)/trademark(s)[3]: ……

4.2. Trade description(s)/ Commercial name(s)[3]:……

4.3. Information in relation to the range of tyres as defined in paragraphs 4.1.5. of this Regulation:……

---

[3] A list of brand name(s)/trademark(s) or Trade description(s)/ Commercial name(s) may be annexed to this communication."

Annex 3, amend to read:

"……

The above example defines a retreaded tyre:

- Having a nominal section width of 295;

- Having……

….

3. The positioning and order of the markings constituting the tyre designation shall be as follows:

(a) The size designation as defined in paragraph 2. of this Regulation shall be grouped as shown in the above examples: 295/80 R 22.5 or 235-700 R 450 A.

(b) The service description comprising the load index (indices) and the speed symbol(s) shall be placed immediately after the tyre size designation as defined in paragraph 2. of this Regulation.

(c) The symbol "TUBELESS" and "M+S" may be at a distance from the size-designation symbol.

(d) The word "RETREAD" may be at a distance from the size-designation symbol.

(e) If paragraph 3.2.6. of this Regulation is applied, the additional service description (Unique Point), comprising the load indices and speed symbol, shall be shown inside a circle near the nominal service description appearing on the tyre sidewall.

…..

Annex 6, Title, amend to read:

"Method of measuring tyres"

Annex 7, amend to read:

"1. Preparing the tyre

…….

1.3. Inflate the tyre to the pressure corresponding to the pressure index as specified in paragraph 3.2.11. of this Regulation.

1.4. Condition the tyre and wheel assembly at test-room temperature for not less than 3 hours.

…..

3. Load/speed test programme for tyres having a speed capability greater than 150 km/h (speed symbol "Q" and above, plus "H").

……

3.1.2. Tyres having a load index in single fitment equal to or greater than 122 and having the additional marking "C" or "LT" referred to in paragraph 3.2.15. of this Regulation."

Annex 7, Appendix 1, Notes, amend to read:

"Notes:
(1) "Special-use" tyres (see paragraph 2.8. of this Regulation) shall be tested at a speed equal to 85 per cent of the speed prescribed for equivalent normal tyres.
(2) Tyres having a load index equal to or greater than 122, a speed symbol "N" or "P" and the additional markings "C" or "LT" included in the tyre size designation (referred to in paragraph 3.2.15. of this Regulation), shall be tested with the same programme as specified in the above table for tyres having a load index equal to or less than 121."

Annex 10, amend to read:

"…….

4. Acceleration method for Class C3 tyres

4.1. According to the definition of class C3 tyres reported into paragraph 2. of this Regulation, the additional classification for the purpose of this test method only applies:

……"

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World Forum for Harmonization of Vehicle Regulations

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Item 4.8.8 of the provisional agenda
1958 Agreement:
Consideration of draft amendments to existing UN Regulations submitted by GRRF

Proposal for Supplement 1 to UN Regulation No. 139 (Brake Assist Systems (BAS))

Submitted by the Working Party on Brakes and Running Gear*

The text reproduced below was adopted by the Working Party on Brakes and Running Gear (GRRF) at its eighty-sixth session (ECE/TRANS/WP.29/GRRF/86, para. 12). It is based on ECE/TRANS/WP.29/GRRF/2018/2. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their June 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

GE.18-05161(E)
1805161

Please recycle

Supplement 1 to UN Regulation No. 139 (Brake Assist Systems (BAS))

Paragraph 5.1., amend to read:

"5.1. Vehicles shall be equipped with a brake assist system meeting the functional requirements specified in paragraph 6. of this Regulation. Compliance with these requirements shall be demonstrated by meeting the provisions of paragraphs 8. or 9. of this Regulation under the test requirements specified in paragraph 7. of this Regulation. In addition to the requirements of this Regulation, vehicles shall also be equipped with ABS in accordance with the technical requirements of UN Regulation No. 13-H."

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Proposal for Supplement 1 to UN Regulation No. 140 (Electronic Stability Control (ESC))

Submitted by the Working Party on Brakes and Running Gear*

The text reproduced below was adopted by the Working Party on Brakes and Running Gear (GRRF) at its eighty-sixth session (ECE/TRANS/WP.29/GRRF/86, para. 12). It is based on ECE/TRANS/WP.29/GRRF/2018/3. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their June 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

GE.18-05164(E)

1805164

Please recycle

Supplement 1 to UN Regulation No. 140 (Electronic Stability Control (ESC))

Paragraph 5.1., amend to read:

"5.1. Vehicles shall be equipped with an ESC system that meets the functional requirements specified in paragraph 6. and the performance requirements in paragraph 7. under the test procedures specified in paragraph 9. and under the test conditions specified in paragraph 8. of this Regulation."

Annex 4,

Paragraph 2.1., amend to read:

"2.1. The validity of the applied modelling and simulation tool shall be verified by means of comparisons with practical vehicle tests. The tests utilised for the validation shall be the dynamic manoeuvres of paragraph 9.9. of this Regulation.

During the tests, the following motion variables, as appropriate, shall be recorded or calculated in accordance with ISO 15037 Part 1:2006: General conditions for passenger cars or Part 2:2002: General conditions for heavy vehicles and buses (depending on the vehicle category):

(a) Steering-wheel angle (δH);

(b) Longitudinal velocity (vX);

(c) Sideslip angle (β) or lateral velocity (vY) – (optional);

(d) Longitudinal acceleration (aX) – (optional);

(e) Lateral acceleration (aY);

(f) Yaw velocity ($d\psi/dt$);

(g) Roll velocity ($d\varphi/dt$);

(h) Pitch velocity ($d\theta/dt$);

(i) Roll angle (φ);

(j) Pitch angle (θ)."

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Proposal for Supplement 4 to the 02 series of amendments to UN Regulation No. 63 (Noise emissions of mopeds)

Submitted by the Working Party on Noise*

The text reproduced below was adopted by the Working Party on Noise (GRB) at its sixty-seventh session (ECE/TRANS/WP.29/GRB/65, para. 14). It is based on ECE/TRANS/WP.29/GRB/2018/4, not amended. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their June 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21, Cluster 3.1), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

GE.18-05359(E)
1805359

Please recycle

Supplement 4 to the 02 series of amendments to UN Regulation No. 63 (Noise emissions of mopeds)

Paragraph 1, amend to read:

"1. Scope

This Regulation applies to vehicles of category L_1[1] with regard to sound emission. Pure electric vehicles, including vehicles with auxiliary electric propulsion, are not in the scope of this Regulation."

Annex 3,

Paragraph 2.2.1., amend to read:

"2.2.1. General condition

Before the measurements are started, the engine shall be brought to its normal operating conditions as regards:

(a) Temperatures;

(b) Tuning;

(c) Fuel;

(d) Sparking plugs, carburettor(s), etc., (as appropriate).

If the vehicle is fitted with fans with an automatic actuating mechanism, this system shall not be interfered with during the sound measurements.

If the vehicle is equipped with devices which are not necessary for its propulsion, but which are used whilst the vehicle is in normal service on the road, those devices shall be in operation in accordance with the specifications of the manufacturer.

In the case of compressed air engines, the normal operating conditions, which do not fall under the above mentioned ones in this paragraph, shall be agreed between the manufacturer and the type-approval authority and shall be annexed to the manufacturer's application for type-approval in accordance with this Regulation."

Paragraph 3.1.2.1., amend to read:

"3.1.2.1. Acceleration test execution

The vehicle shall approach line AA' at an initial steady speed as specified below. When the front of the vehicle reaches line AA' the accelerator control shall be fully opened as quickly as practically possible and kept in that position until the rear of the vehicle reaches line BB'; the accelerator control shall then be returned as quickly as possible to the idle position.

For all measurements, the vehicle shall be driven in a straight line along the test track in such a way that the track of the median longitudinal plane of the vehicle is as close as possible to the line CC'."

Paragraph 3.2.3.2., amend to read:

"3.2.3.2. Position and preparation of the vehicle

Before the measurements are started, the engine of the vehicle shall be brought to its normal operating temperature, if it is an internal combustion engine, or to its normal operating condition, if it is a compressed air engine. If the vehicle is equipped with automatic fans, no adjustment shall be made to them during the measurement of the sound level.

While measurements are being made, the gear lever shall be in neutral. If the transmission cannot be disconnected, the drive wheel of the vehicle should be allowed to run under no-load conditions by, for example, placing the vehicle on its stand."

Paragraph 3.2.3.3.2.2., amend to read:

"3.2.3.3.2.2. The engine speed shall be gradually increased from idle to the target engine speed and held constant within a tolerance band of ±5 per cent. Then the accelerator control shall be rapidly released and the engine speed shall be returned to idle. The sound pressure level shall be measured during a period consisting of constant engine speed of at least 1 s and throughout the entire deceleration period. The maximum sound level meter reading shall be taken as the test value.

A measurement shall be valid only if the test engine speed did not deviate from the target engine speed by more than the specified tolerance of ±5 per cent for at least 1 s."

Paragraph 4.2., amend to read:

"4.2. In order to facilitate in use compliance test of vehicles, the following information relating to the sound pressure level measurements carried out in accordance with paragraph 3.1. of Annex 3 for the vehicle in motion is referred to as in use compliance reference data:

(a) Gear (i) or, for vehicles tested with non-locked gear ratios, the position of the gear selector chosen for the test;

(b) The vehicle speed $v_{AA'}$ in km/h at the beginning of the maximum speed or acceleration test with the accelerator control fully engaged in gear (i); and

(c) The final test result in dB(A) as determined according to paragraph 3.1.4. of this annex."

Paragraph 5.1.4.2.6., amend to read:

"5.1.4.2.6. The power indicated by the dynamometer shall be 50 per cent of the power with the accelerator control fully engaged, measured at 75 per cent of the rated engine speed as defined in paragraph 2.7. of this Regulation."

Annex 4, amend to read:

"Annex 4

Maximum sound level limits (new vehicles)

Maximum design speed in km/h	*Maximum sound level values in dB(A)*
≤ 25	66
> 25	71
Cycles designed to pedal equipped with an auxiliary propulsion, other than electrical, with the primary aim to aid pedalling and output of auxiliary propulsion is cut off at a vehicle speed ≤ 25 km/h	63

"

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Consideration of draft amendments to existing UN Regulations submitted by GRB

Proposal for Supplement 4 to the 03 series of amendments to UN Regulation No. 51 (Noise of M and N categories of vehicles)

Submitted by the Working Party on Noise*

The text reproduced below was adopted by the Working Party on Noise (GRB) at its sixty-seventh session (ECE/TRANS/WP.29/GRB/65, paras. 8 and 11). It is based on Annexes II and III to the report. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their June 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21, Cluster 3.1), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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Supplement 4 to the 03 series of amendments to UN Regulation No. 51 (Noise of M and N categories of vehicles)

Table of Contents, Annexes, add a new Annex 8:

"8 Indoor testing ..... "

Paragraph 6.2.1.1., amend to read:

"6.2.1.1. The sound made by the vehicle type submitted for approval shall be measured either indoors or outdoors by the methods described in Annex 3 to this Regulation. The specific conditions for indoor testing are provided in Annex 8 to this Regulation. The results of the outdoor and indoor tests are deemed equivalent.

For each specific test condition for vehicles, the manufacturer can select to test the vehicle either indoors or outdoors. The Type Approval Authority shall always have the option to mandate an outdoor test for verification. The option of the type approval authority to mandate an outdoor test shall apply to any test specified in this Regulation, including conformity of production testing.

In addition, the sound shall be measured on the stationary[3] vehicle; in the case of a vehicle where an internal combustion engine cannot operate when the vehicle is stationary, the emitted sound shall only be measured in motion. In the case of a hybrid electrical vehicle of category M_1 where an internal combustion engine cannot operate when the vehicle is stationary, the emitted sound shall be measured according to Annex 3, paragraph 4.

..."

Annex 1

Appendix 1, insert new items 2.4. and 2.4.1. to read:

"2.4. Testing method information

2.4.1. Test method selected: Outdoor/Indoor[1]"

Annex 3,

Paragraph 1., amend to read:

"1. Measuring instruments

1.1. Acoustic measurements

The apparatus used for measuring the sound level shall be a precision sound-level meter or equivalent measurement system meeting the requirements of Class 1 instruments (inclusive of the recommended windscreen, if used). These requirements are described in "IEC 61672- 1:2002: Precision sound level meters", second edition, of the International Electrotechnical Commission (IEC).

For indoor testing, when no general statement or conclusion can be made about conformance of the sound level meter by each channel of the array

[1] Delete what does not apply.

conformance (e.g. when pass-by sound level simulation algorithms do not compute the overall level but spectrum or temporal to recompose it), a simulated pass-by run shall be performed at a constant speed of 50 km/h while a constant tone signal is supplied to all channels of the arrays. The simulated A-weighted sound level is processed and the deviation from a reference tone signal shall be checked in accordance to IEC 61672-3.

..."

Paragraph 1.2., amend to read:

"1.2. Calibration of the entire Acoustic Measurement System for a Measurement Session

...

For indoor testing, the entire measurement system shall be checked at the beginning and at the end of a series of sessions.

A qualified calibration method (i.e. electrical calibration) is recommended to be provided by the hardware supplier and, in that case, shall be implemented in the measurement software used. Simulation algorithms using sound source localization detection should deactivate that feature for these tests."

Paragraph 2.1., amend to read:

"2.1. Test Site and ambient conditions

The specifications for the test site provide the necessary acoustic environment to carry out the vehicle tests documented in this Regulation. Outdoor and indoor test environments that meet the specifications of this Regulation provide equivalent acoustic environments and produce results that are equally valid.

2.1.1. Test Site Outdoor

The surface of the test track and the dimensions of the test site shall be in accordance with ISO 10844:2014.

2.1.2. Test Site Indoor

Test Site Indoor requirements shall be as specified below.

(a) The test room dimensions are described in paragraph 7.2. of ISO 362-3:2016. All room dimensions may be adjusted to meet the specific application for the products being tested according to Annex 8, paragraph 4.

(b) The test facility shall meet the requirements of ISO 26101:2012 with the qualification criteria and measurement requirements appropriate to this test method as described in ISO 362-3:2016, paragraph 7.3.

(c) Condition of the floor is described in ISO 362-3:2016, paragraph 7.4.

(d) Cooling, ventilation, and exhaust gas management are described in ISO 362-3:2016, paragraph 7.5.

(e) Dynamometer requirements are described in ISO 362-3:2016, paragraph 8.

(f) Vehicle fixing system is described in ISO 362-3:2016, paragraph 9.3.

2.1.3. Ambient conditions

The surface of the site shall be free of powdery snow, tall grass, loose soil or cinders. There shall be no obstacle which could affect the sound field within the vicinity of the microphone and the sound source. The observer carrying out the measurements shall so position themselves as not to affect the readings of the measuring instrument.

...

For indoor testing, background noise shall take into account noise emissions produced by the dynamometer rollers, ventilation systems, and facility exhaust gas systems."

Paragraph 2.2.1., amend to read:

"2.2.1. ...

Measurements shall be made on vehicles at the test mass m_t specified according to the following table.

When testing indoors, the test mass, m_t shall be utilized by the control system of the dyno roller. Actual mass of the vehicle has no effect on results and it is permitted to load the vehicle as necessary to prevent slip between the tyres and the dyno rolls. To detect excessive slip, it is recommended to control the ratio of engine rotational speed and vehicle speed between the acceleration phase and the constant-speed status. To avoid slip, it is possible to increase the axle load.

..."

Paragraph 2.2.2., amend to read:

"2.2.2. ...

When performing indoor testing, tyre/road sound is evaluated independently on the test track with the tyres to be used, according to this paragraph. Propulsion sound is independently evaluated on the dynamometer using tyres and other sound control measures to produce tyre/road sound which does not influence the measurement result."

Paragraph 3., amend to read:

"3. Methods of testing

Outdoor tests shall be performed according to paragraph 3.1.

Indoor tests shall be performed according to paragraph 3.1. using the specifications of ISO 362-3:2016, variant A. For indoor application, the manufacturer shall provide to the technical service, documentation according to Annex 8, paragraph 1. Variant A is a combination of indoor testing (power train sound) and outdoor testing (tyre/road sound).

..."

Paragraph 3.1.1., amend to read:

"3.1.1. General conditions of test

For outdoor testing, two lines, AA' and BB', parallel to line PP' and situated respectively 10 m ± 0.05 m forward and 10 m ± 0.05 m rearward of line PP' shall be marked out on the test runway.

For indoor testing, the virtual line AA' indicates the beginning of the test track, PP' indicates the virtual position of the two pass-by microphones, and

BB' indicates the end of the test track. The simulated vehicle speed at AA', $v_{AA'}$, or vehicle speed at PP', $v_{PP'}$, is defined by the roller speed when the reference point of the vehicle passes the virtual line AA' or PP', respectively. The simulated vehicle speed at BB', $v_{BB'}$, is defined when the rear of the vehicle passes the virtual line BB'.

..."

Paragraph 3.1.2.1.4.1., add a new subparagraph (e):

"3.1.2.1.4.1. Vehicles with manual transmission, automatic transmissions, adaptive transmissions or CVTs tested with locked gear ratios

...

(e) If no gear ratio is available with an acceleration below 2.0 m/s², the manufacturer shall, if possible take measures to avoid an acceleration value a_{wot} test greater than 2.0 m/s².

Table 1 in Appendix to Annex 3 provides examples for valid measures to control the downshift of gears or to avoid accelerations beyond 2.0 m/s². Any measure used by manufacturer for the above-mentioned purposes shall be documented in the test report."

Paragraph 3.1.2.1.4.2., amend to read:

"3.1.2.1.4.2. Vehicles with automatic transmission, adaptive transmissions and CVTs tested with non-locked gear ratios:

...

Therefore, it is permitted to establish and use electronic or mechanical devices, including alternate gear selector positions, to prevent a downshift to a gear ratio which is typically not used for the specified test condition in urban traffic.

If possible, the manufacturer shall take measures to avoid an acceleration value a_{wot} test greater than 2.0 m/s².

Table 1 in Appendix to Annex 3 provides examples for valid measures to control the downshift of gears or to avoid accelerations beyond 2.0 m/s². Any measure used by manufacturer for the above-mentioned purposes shall be documented in the test report.

..."

Paragraph 3.1.2.1.4.3., amend to read:

"3.1.2.1.4.3. Vehicles with only one gear ratio, like but not limited to Battery Electric Vehicles (BEV) and Fuel Cell Vehicles (FCV)

...

If possible, the manufacturer shall take measures to avoid an acceleration value $a_{wot\ test}$ greater than 2.0 m/s².

Table 1 in Appendix to Annex 3 provides examples for valid measures to avoid accelerations beyond 2.0 m/s². Any measure used by manufacturer for the above-mentioned purposes shall be documented in the test report.

..."

Paragraph 3.1.2.2.1.2., amend to read:

"3.1.2.2.1.2. Automatic transmission, adaptive transmissions, and transmissions with variable gear ratio tested with non-locked gear ratios

The gear selector position for full automatic operation shall be used.

The test may then include a gear change to a lower range and a higher acceleration. A gear change to a higher range and a lower acceleration is not allowed. In any case a gear change to a gear ratio that is typically not used at the specified condition as defined by the manufacturer in urban traffic shall be avoided.

Therefore, it is permitted to establish and use electronic or mechanical devices, including alternative gear selector positions, to prevent a downshift to a gear ratio that is typically not used at the specified test condition as defined by the manufacturer in urban traffic.

Table 1 in Appendix to Annex 3 provides examples for valid measures to control the downshift of gears. Any measure used by manufacturer for the above-mentioned purposes shall be documented in the test report.

..."

Paragraph 3.1.3., amend to read:

"3.1.3. Interpretation of results

For vehicles of categories M_1 and M_2 having a maximum authorized mass not exceeding 3,500 kg, and category N_1 the maximum A-weighted sound pressure level indicated during each passage of the vehicle between the two lines AA' and BB' shall be rounded to the first significant digit after the decimal place (e.g. XX,X).

For vehicles of category M_2 having a maximum authorized mass exceeding 3,500 kg and categories M_3, N_2, and N_3 the maximum A-weighted sound pressure level indicated during each passage of the reference point of the vehicle between line AA' and line BB' + 5 m shall be rounded, to the first significant digit after the decimal place (e.g. XX,X).

For indoor testing, pass-by sound is simulated by measurement of power train sound on the dynamometer and energetical addition of the tyre/road sound (measured separately on an outdoor test track) according to Annex 8, paragraph 2 of this Regulation.

..."

Appendix to Annex 3, at the end, add a new table 1:

"Table 1
Examples for Devices and Measures to Enable a Vehicle Tested within the Acceleration Boundaries

No.	*Impact*	*Sub No.*	*Measure*	*Additional Requirements*
1	Lock of a discrete gear ratio	1*	A discrete gear ratio can be locked by the driver	none
		2	A discrete gear ratio is available onboard, but is not available to the driver. Locking can be activated by the manufacturer with an onboard (hidden) function or with an external device	none
2	Controlled gear shift management: Applicable to transmissions which cannot be locked, or where no locked gear provides a valid test result	1*	Kickdown is deactivated	none
		2	Gear shift change(s) can happen during the test, gear shift is controlled by activation of an internal function or external device	Acceleration** shall be between a_{urban} and $a_{wot,ref}$, not exceeding 2.0 m/s².
3	Partial load driving****	1	Acceleration is limited by a mechanical device	Acceleration** shall be between a_{urban} and $a_{wot,ref}$, not exceeding 2.0 m/s².
		2	External Programming for partial load acceleration***)	
4	Mixed Solution (Mode): This measure will be a mix of the above solutions combined in a specific mode	1*	Mode is available onboard and can be selected by the driver	none
		2	Mode is available onboard and can only be activated by the manufacturer with a hidden function or an external device	none
		3	Mode is not available onboard, an external software overrides the internal software	Acceleration** shall be between a_{urban} and $a_{wot,ref}$, not exceeding 2.0 m/s².

* Comment: This is a standard situation, already covered by the Regulation text.

** Applicable to vehicles of category M_1, N_1 and $M_2 \leq 3{,}500$ kg.

*** Partial load shall be achieved by simulation of the travel restriction of the accelerator. It is not allowed to interfere with the engine control management.

**** Applicable only to Pure Electric Vehicle (PEV) as defined in the 07 series of amendments to UN Regulation No. 83, paragraph 2.30.

"

Annex 7

Paragraph 2.5.1., amend to read:

"2.5.1. ...

In case of non-locked transmission conditions, the test may include a gear ratio change to a lower range and a higher acceleration. A gear change to a higher range and a lower acceleration is not allowed.

If possible, the manufacturer shall take measures to avoid that a gearshift leads to a condition not in compliance with the boundary conditions. For that, it is permitted to establish and use electronic or mechanical devices, such as alternate gear selector positions. If no such measures can be applied, the rationale shall be provided and documented in the technical report.

Table 1 in Appendix to Annex 3 provides examples for valid measures to control the downshift of gears. Any measure used by manufacturer for the above-mentioned purposes shall be documented in the test report."

Insert a new Annex 8 to read:

"Annex 8

Indoor testing

1. Documentation for indoor application

Documentation shall include:

(a) Validation of facility, e.g. free field propagation, dyno and air handling background noise level, dyno dynamic performance, software.

(b) Procedures to be applied for indoor testing, e.g. dyno and software set-up, loading and tie-down, air-handling and vehicle's temperature management.

(c) Coast down and tyre sound level data used for calculation of dynamometer load coefficients and tyre sound data used for determination of final reported results.

(d) Test results on a representative selection of the manufacturer's production to demonstrate that indoor testing delivers comparable results as outdoor testing within acceptable accuracy.

2. Vehicle tested indoor using Variant A

Indoor pass-by test is simulated by measurement of power train sound on the dynamometer and energetical addition of the tyre/road sound (measured separately on an outdoor test track).

2.1. General

This method is a combination of indoor testing (power train sound) and outdoor testing (tyre/road sound). It is not necessary to repeat the measurement of the tyre/road sound every time a vehicle is tested. The data of several tyres can be stored in a database and a matching data set from the database can then be used for the test.

2.2. Power train sound

It shall be ensured that there is no remaining tyre/road sound affecting the measurements. In any case it shall be ensured that the remaining tyre/road sound shall be at least 10 dB below the maximum A-weighted sound pressure level produced by the vehicle under test. If this condition cannot be fulfilled, a correction shall be carried out. This correction procedure is described in ISO 362-3:2016 Annex B, paragraph B.6.

The vehicle shall be measured according to the operating condition specified in paragraphs 3.1.2.1. or 3.1.2.2. of Annex 3 of this Regulation.

2.3. Tyre/road sound

The measurements of the tyre/road sound shall be performed on a test track as described paragraph 2.1.1. of Annex 3 of this Regulation. The evaluation of tyre/road sound consists of two procedures, namely:

(a) Evaluation of free rolling sound;

(b) Evaluation of tyre/road sound including torque influence which can be derived from a) by a simplified method.

All conditions for evaluation of tyre/road sound shall be done according to paragraph 3. of this Annex.

2.4. Calculation of the total vehicle sound

The total vehicle sound is the energetical sum of tyre/road sound and power train sound. This calculation shall be carried out for each single run as describe in ISO 362-3.2016, paragraph 10.2.4.

3. Procedure for measurement, evaluation, and calculation of tyre/road sound when using variant A

All conditions for evaluation of tyre/road sound, free rolling sound, and torque influence are described in ISO 362-3:2016, Annex B.

4. Adjustment of room dimensions

To cater for the smaller size test rooms, the maximum levels shall be evaluated with caution though to avoid missing them according to ISO 362-3:2016, Annex E."

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Proposal for Corrigendum 1 to Supplement 9 to the 06 series of amendments to UN Regulation No. 16 (Safety-belts)

Submitted by the Working Party on Passive Safety*

The text reproduced below was adopted by the Working Party on Passive Safety (GRSP) at its sixty-second session (ECE/TRANS/WP.29/GRSP/62, para. 14). It is based on ECE/TRANS/WP.29/GRSP/2017/21 as amended by Annex IV to the report. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their June 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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1805522

Please recycle

Corrigendum 1 to Supplement 9 to the 06 series of amendments to UN Regulation No. 16 (Safety-belts)

Paragraph 6.4.1.4.1.1., correct to read:

"6.4.1.4.1.1. In the case of the driver, contact of the chest with the steering assembly would be allowed, if the latter meets the requirements of UN Regulation No. 12 and provided contact does not occur at a speed higher than 24 km/h. For this assessment the seat shall be considered to be in the positions specified in paragraph 7.7.1.5. below."

Paragraph 8.3.6., correct to read:

"8.3.6. Any i-Size seating position shall allow the installation of the ISOFIX child restraint fixture "ISO/F2X", "ISO/R2", and the support leg installation assessment volume as defined in Appendix 2 of Annex 17, as well as the booster seat fixture "ISO/B2" as defined in Appendix 5 of Annex 17, without the ISOFIX attachments (see detail B). It shall be possible to occupy all adjacent i-Size seating positions simultaneously. This is deemed to be demonstrated when the vertical median planes of individual adjacent positions are at least 440 mm apart.

..."

Annex 17,

Appendix 2, paragraph 3.1., correct to read:

"3.1. It has to be possible to accommodate the CRF(s), with or without i-Size support leg installation assessment volume, without interference with the vehicle interior. The CRF base shall have a pitch angle of 15° ± 10°, above the horizontal plane passing through the ISOFIX anchorages system. ISOFIX attachments, according to detail Y of figures 1 to 8,..."

Appendix 2, paragrah 3.3., correct to read:

"3.3. Should the above requirements not be met .... These alternative positions shall be described in the vehicle handbook and with the additional information specified in Appendix 3 to this annex. ..."

Appendix 3, Table 1, correct to read:

"Table 1

This table gives technical information specifically intended e.g. for child restraint system manufacturer and as such translation into national languages is not required.

	Seating position								
Seat position number	1	2	3	4	5	6	7	8	9
Seating position suitable for universal belted (yes/ no)									
i-Size seating position (yes/ no)									
Seating position suitable for lateral fixture (L1/ L2)									
Largest suitable rearward facing fixture (R1/ R2X/ R2/ R3)									
Largest suitable forward facing fixture (F2X /F2/ F3)									
Largest suitable booster fixture (B2/B3)									

"

Appendix 5, the title, correct to read:

"Annex 17 – Appendix 5

Provisions concerning the installation of forward-facing booster seat child restraint systems of i-Size and specific categories installed on vehicle seating positions or i-Size seating positions"

Appendix 5, paragraph 4., correct to read:

"4. Booster seat child restraint system fixtures:

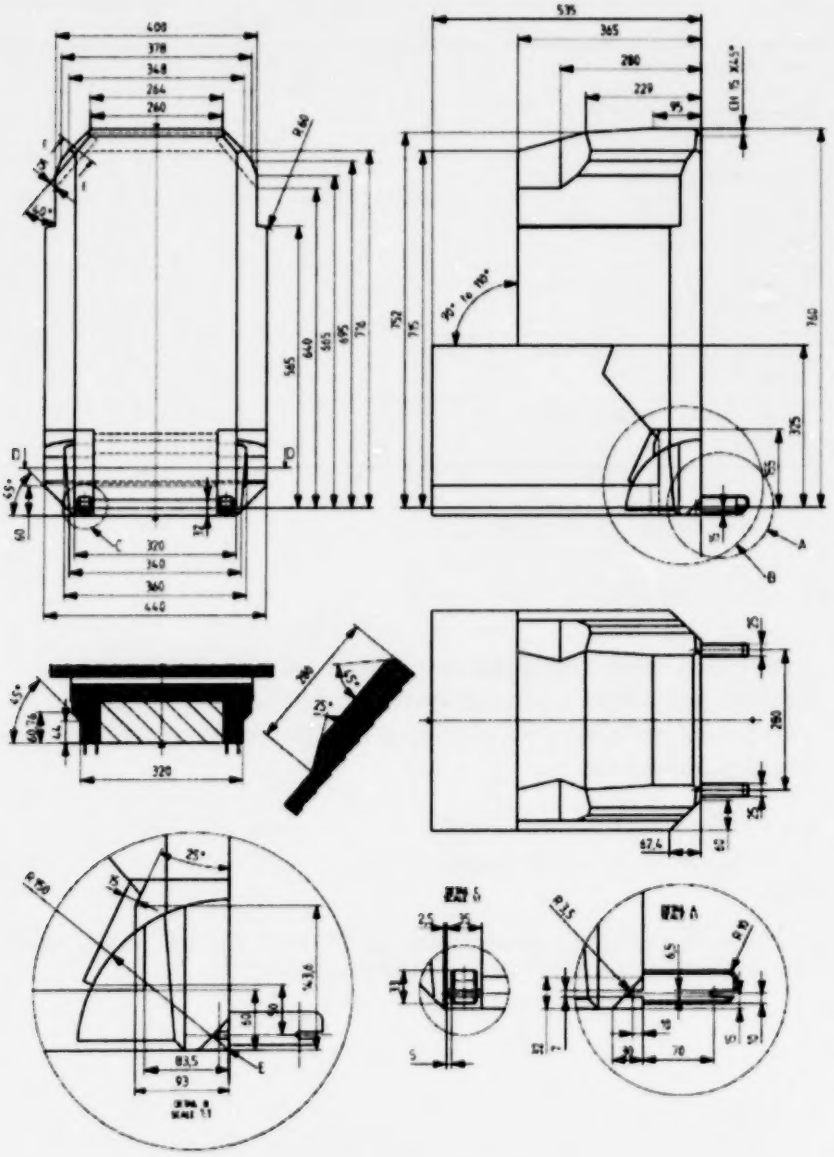
...

The fixtures above shall be constructed with a mass of 7 kg +/- 1 kg and shall be of suitable durability and stiffness to satisfy the functional requirements."

Appendix 5, figure 2 ISO B2, to be replaced as follows:

"Figure 2

...

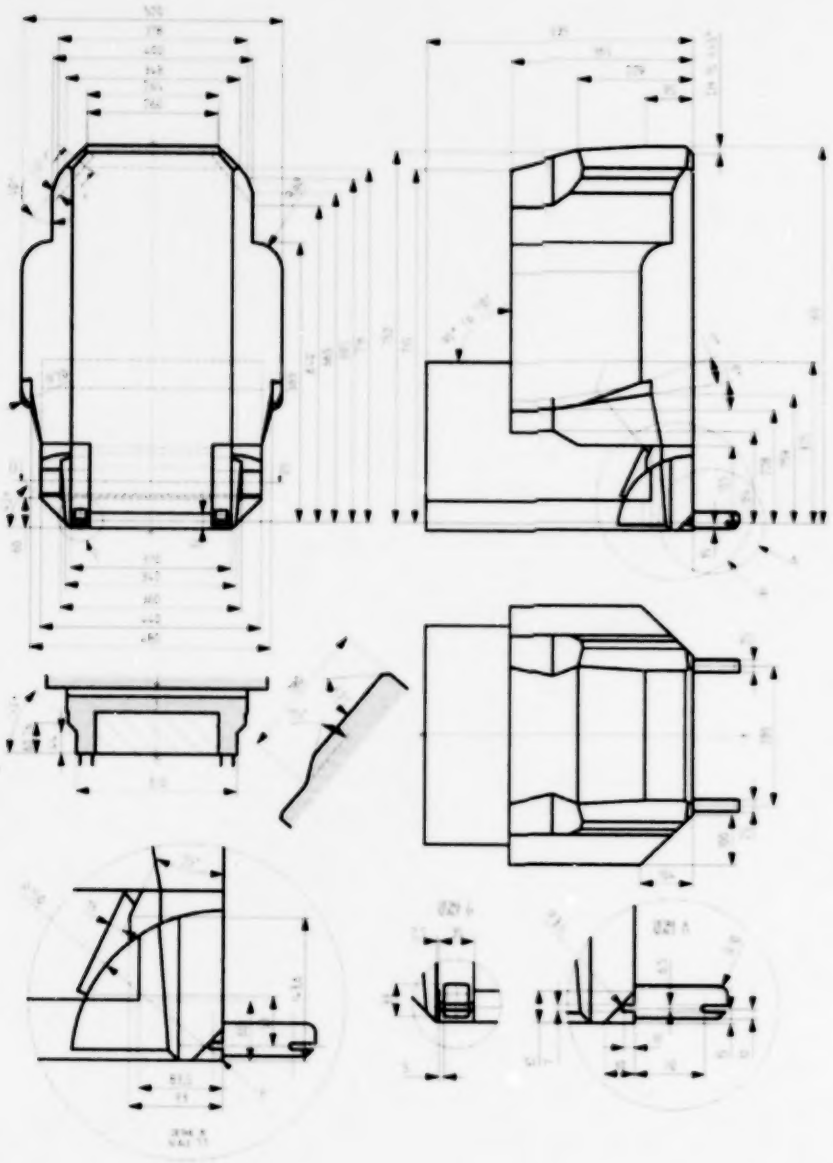


"

Appendix 5, Figure 3 ISO/B3, to be replaced as follows:

"Figure 3

...



(all dimensions in millimetres)

"

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* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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1805525

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Corrigendum 1 to Supplement 1 to the 07 series of amendments to UN Regulation No. 16 (Safety-belts)

Paragraph 6.4.1.4.1.1., correct to read:

"6.4.1.4.1.1. In the case of the driver, contact of the chest with the steering assembly would be allowed, if the latter meets the requirements of UN Regulation No. 12 and provided contact does not occur at a speed higher than 24 km/h. For this assessment the seat shall be considered to be in the positions specified in paragraph 7.7.1.5. below."

*Paragraph 8.*3.6., correct to read:

"8.3.6. Any i-Size seating position shall allow the installation of the ISOFIX child restraint fixture "ISO/F2X", "ISO/R2", and the support leg installation assessment volume as defined in Appendix 2 of Annex 17, as well as the booster seat fixture "ISO/B2" as defined in Appendix 5 of Annex 17, without the ISOFIX attachments (see detail B). It shall be possible to occupy all adjacent i-Size seating positions simultaneously. This is deemed to be demonstrated when the vertical median planes of individual adjacent positions are at least 440 mm apart.

..."

Annex 17,

Paragraph 1.2., correct to read:

"1.2. A child restraint system of the universal category means a child restraint approved to the "universal" category of UN Regulation No. 44, Supplement 5 to 03 series of amendments (or subsequent amendments). Seating positions, which are indicated by the vehicle manufacturer as being suitable for the installation of child restraints systems of the universal category shall comply with the provisions of Appendix 1 to this annex."

Appendix 2, paragraph 3.1., correct to read:

"3.1. It has to be possible to accommodate the CRF(s), with or without i-Size support leg installation assessment volume, without interference with the vehicle interior. The CRF base shall have a pitch angle of 15° ± 10°, above the horizontal plane passing through the ISOFIX anchorages system. ISOFIX attachments, according to detail Y of figures 1 to 8..."

Appendix 2, paragrah 3.3., correct to read:

"3.3. Should the above requirements not be met .... These alternative positions shall be described in the vehicle handbook and with the additional information specified in Appendix 3 to this annex. ..."

Appendix 3, Table 1, correct to read:

"Annex 17 – Appendix 3

...

	Seating position								
Seat position number	1	2	3	4	5	6	7	8	9
Seating position suitable for universal belted (yes/ no)									
i-Size seating position (yes/ no)									
Seating position suitable for lateral fixture (L1/ L2)									
Largest suitable rearward facing fixture (R1/ R2X/ R2/ R3)									
Largest suitable forward facing fixture (F2X /F2/ F3)									
Largest suitable booster fixture (B2/B3)									

"

Annex 17, Appendix 5, the title, correct to read:

"Annex 17 – Appendix 5

Provisions concerning the installation of forward-facing booster seat child restraint systems of i-Size and specific categories installed on vehicle seating positions or i-Size seating positions"

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1958 Agreement:
Consideration of draft corrigenda to existing UN Regulations submitted by GRs if any

Proposal for Corrigendum 1 to Supplement 10 to the 06 series of amendments to UN Regulation No. 16 (Safety-belts)

Submitted by the Working Party on Passive Safety*

The text reproduced below was adopted by the Working Party on Passive Safety (GRSP) at its sixty-second session (ECE/TRANS/WP.29/GRSP/62, para. 14). It is based on GRSP-62-08 as reproduced in Annex IV to the report. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their June 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

GE.18-05527(E)

1805527

Please recycle

Corrigendum 1 to Supplement 10 to the 06 series of amendments to UN Regulation No. 16 (Safety-belts)

Paragraph 8.3.6., correct to read:

"8.3.6. ...

The pitch angle used for the geometrical assessment above shall be as measured in paragraph 5.2.3.4. of UN Regulation No. 14 or 5.2.2.4 of UN Regulation No. [144].

..."

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Consideration of draft corrigenda to existing UN Regulations submitted by GRs if any

Proposal for Corrigendum 1 to Supplement 17 to UN Regulation No. 75 (Tyres for L-category vehicles)

Submitted by the Working Party on Brakes and Running Gear*

The text reproduced below was adopted by the Working Party on Brakes and Running Gear (GRRF) at its eighty-sixth session (ECE/TRANS/WP.29/GRRF/86, para. 31). It is based on Annex V of the session report. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their June 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

GE.18-05543(E)

1805543

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Corrigendum 1 to Supplement 17 to UN Regulation No. 75 (Tyres for L-category vehicles)

Annex 7,

Paragraph 1.2., Footnote 1, correct to read:

"_____

[1] From the date of entry into force of Supplement 8 to this Regulation no new approvals for these tyres should be issued pursuant to UN Regulation No. 75. These tyre sizes are now included in UN Regulation No. 54."